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GeoRunner (World Exploration)

A. Introduction

GeoRunner provides a fun way to learn geography and interesting facts about the continents, oceans, countries and geographic landmarks of the world. The object of the game is to search the world for hidden keys to free the main character, Blit. In the process of finding keys, the student will explore 170 countries, 32 seas and oceans, and numerous mountain ranges, rivers, and deserts. In addition, the student will be given the opportunity to learn 170 national capitals.

The game has 15 stages of difficulty with 7 different areas of the world in each stage, for a total of 105 levels of play. The slider bar at the bottom of the screen adjusts the difficulty, and areas (continents, regions, or the world as a whole) can be selected simply by clicking on the map.

B. Objectives

1. To learn to identify the shape and location of the countries of the world.
2. To learn the capitals of each country.
3. To learn important facts about the countries of the world
4. To learn to identify the world’s continents, oceans and geographic landmarks.
5. To learn important facts about the world’s continents, oceans and geographic landmarks.

C. Methods

The following provides descriptions of the specific levels of play for GeoRunner that you may use to accomplish the objectives of the program. There are 15 Difficulty stages for both the continents and the world as a whole. In the first 6 Difficulty stages, the game uses a propeller plane with automatic refueling. In the higher Difficulty stages (7-15), the game uses a jet plane with limited fuel. Refer below for more details and for examples of questions from each Difficulty stage.

I. The Continents:

The Propeller Plane:

Difficulty 1 -- Levels 2-7 (for Objective 1):
-4 keys, automatic refueling
-Find the named country visibly marked with a key.
(Example: “Fly to Nigeria.”)

Difficulty 2 -- Levels 9-14 (for Objective 1):
-4 keys, automatic refueling
-Find the named country on a map.
(Example: “Fly to Nigeria.”)

Difficulty 3 -- Levels 16-21 (for Objectives 1 and 2):
-4 keys, automatic refueling
-Find the named country on a map, and learn its capital.
(Example: “Fly to Abuja, the capital of Nigeria.”)

Difficulty 4 -- Levels 23-28 (for Objectives 1, 3 and 4):
-4 keys, automatic refueling
-Find the named country on a map, and learn important facts about it.
(Example: “Fly to Nigeria, the most populous country in Africa.”)

Difficulty 5 -- Levels 30-35 (for Objectives 1 and 2):
-4 keys, automatic refueling
-Find the named country on a map, based on its capital.
(Example: “Fly to the country whose capital is Abuja.”)

Difficulty 6 -- Levels 37-42 (for Objectives 1 and 3):
-4 keys, automatic refueling
-Find the named country on a map, based on an important fact

about it.
(Example: “Fly to the most populous country in Africa.”)

The Jet Plane:

Difficulty 7 -- Levels 44-49 (for Objective 1):
-4 keys, limited fuel
-Find the named country on a blank map.
(Example: “Fly to Nigeria.”)

Difficulty 8 -- Levels 51-56 (for Objectives 1 and 2):
-4 keys, limited fuel
-Find the named country on a blank map, and learn its capital.
(Example: “Fly to Abuja, the capital of Nigeria.”)

Difficulty 9 -- Levels 58-63 (for Objectives 1 and 3):
-4 keys, limited fuel
-Find the named country on a blank map, and learn important facts about it.
(Example: “Fly to Nigeria, the most populous country in Africa.”)

Difficulty 10 -- Levels 65-70 (for Objectives 1 and 2):
-4 keys, limited fuel
-Find the named country on a blank map, based on its capital.
(Example: “Fly to the country whose capital is Abuja.”)

Difficulty 11 -- Levels 72-77 (for Objectives 1 and 3):
-4 keys, limited fuel
-Find the named country on a blank map, based on an important
fact about it.
(Example: “Fly to the most populous country in Africa.”)

Difficulty 12 -- Levels 79-84 (for Objectives 1 and 2):
-8 keys, limited fuel
-Find the named country on a blank map, and learn its capital.
(Example: “Fly to Abuja, the capital of Nigeria.”)

Difficulty 13 -- Levels 86-91 (for Objectives 1 and 3):
-8 keys, limited fuel
-Find the named country on a blank map, and learn important facts about it.
(Example: “Fly to Nigeria, the most populous country in

Africa.")

Difficulty 14 -- Levels 93-98 (for Objectives 1 and 2):
-8 keys, limited fuel
-Find the named country on a blank map, based on its capital.
(Example: "Fly to the country whose capital is Abuja.")

Difficulty 15 -- Levels 100-105 (for Objectives 1 and 3):
-8 keys, limited fuel
-Find the named country on a blank map, based on an important
fact about it.
(Example: "Fly to the most populous country in Africa.")

II. The World:

The Propeller Plane:

Difficulty 1 -- Level 1 (for Objective 4):
-4 keys, automatic refueling
-Find the named continent or ocean visibly marked with a key.
(Example: "Fly to Africa.")

Difficulty 2 -- Level 8 (for Objective 4):
-4 keys, automatic refueling
-Find the named continent or ocean on a map.
(Example: "Fly to Africa.")

Difficulty 3 -- Level 15 (for Objectives 4 and 5):
-4 keys, automatic refueling
-Find the named continent or ocean on a map, and learn about its geographical landmarks.
(Example: "Fly to Africa, the continent that contains the Sahara Desert.")

Difficulty 4 -- Level 22 (for Objectives 4 and 5):
-4 keys, automatic refueling
-Find the named continent or ocean on a map, based on an important fact about its geographical landmarks.
(Example: "Fly to Africa, the continent that contains the largest desert in the world.")

Difficulty 5 -- Level 29 (for Objectives 4 and 5):
-4 keys, automatic refueling
-Find the named continent or ocean on a blank map, based on

one of its geographic landmarks.
(Example: “Fly to the continent that contains the Sahara Desert.”)

Difficulty 6 -- Level 36 (for Objectives 4 and 5):
-4 keys, automatic refueling
-Find the named continent or ocean on a blank map, based on an important fact about one of its geographic landmarks
(Example: “Fly to the continent that contains the largest desert in the world.”)

<u>The Jet Plane:</u>

Difficulty 7 -- Level 43 (for Objectives 4 and 5):
-4 keys, limited fuel
-Find the named geographic landmark on a map, and learn important facts about it.
(Example: “Fly to the Sahara Desert, the largest desert in the world.”)

Difficulty 8 -- Level 50 (for Objectives 4 and 5):
-4 keys, limited fuel
-Find the named body of water on a map, and learn important facts about it.
(Example: “Fly to the Dead Sea, the saltiest body of water in the world.”)

Difficulty 9 -- Level 57 (for Objectives 4 and 5):
-4 keys, limited fuel
-Find the named landmark on a map, based on an important fact about it.
(Example: “Fly to the largest desert in the world.”)

Difficulty 10 -- Level 64 (for Objectives 4 and 5):
-4 keys, limited fuel
-Find the named body of water on a map, based on an important fact about it.
(Example: “Fly to the saltiest body of water in the world.”)

Difficulty 11 -- Level 71 (for Objective 4):
-4 keys, limited fuel
-Find the named landmark or body of water on a map.
(Example: “Fly to the Sahara Desert.”)

(Example: “Fly to the Dead Sea.”)

Difficulty 12 -- Level 78 (for Objectives 4 and 5):
-8 keys, limited fuel
-Find the named landmark on a blank map, and learn important facts about it.
(Example: “Fly to the Sahara Desert, the largest desert in the world.”)

Difficulty 13 -- Level 85 (for Objectives 4 and 5):
-8 keys, limited fuel
-Find the named body of water on a blank map, and learn important facts about it.
(Example: “Fly to the Dead Sea, the saltiest body of water in the world.”)

Difficulty 14 -- Level 92 (for Objectives 4 and 5):
-8 keys, limited fuel
-Find the named landmark or body of water on a blank map, based on an important fact about it.
(Example: “Fly to the largest desert in the world.”)
(Example: “Fly to the saltiest body of water in the world.”)

Difficulty 15 -- Level 99 (for Objectives 4 and 5):
-8 keys, limited fuel
-Find the named landmark or body of water on a blank map.
(Example: “Fly to the Sahara Desert.”)
(Example: “Fly to the Dead Sea.”)

D. Tracking

The tracking function on GeoRunner lists the Difficulty stages played and the clues provided. In addition, it notes when the student has to refuel (lower Difficulties) or when the student runs out of fuel (higher Difficulties) searching for a location. The tracking function data is stored in a text file that can be accessed by most word processing programs. Hint: For best results, change the font of your tracking output to a monospaced font, such as “Courier.”

The tracking function is automatically activated. You will be given the opportunity to access the tracking information when you exit the program. When the student is finished using the program, click on the “EXIT” button. On the next screen that appears, there are three options: SAVE, PRINT, and EXIT. To

save the tracking information, click the “SAVE” button; when the dialogue box appears, name the file, and designate where you want to save it. To print the tracking information, click the “PRINT” button, and follow the directions of your operating system. To simply exit the program without saving the tracking information, click the “EXIT” button.

E. Teaching Suggestions

There are two types of play: the propeller plane (Levels 1-42) and the jet plane (Levels 43-105). At Levels 1-42, the student has the opportunity, without fuel limits, to explore the map in search of the specified country, continent, or landmark. At each refueling at the lower levels, the program provides directional clues to help find the location. At Levels 43-105, when the jet runs out of fuel, the plane automatically lands; the correct country, continent, or landmark is then automatically identified, and any keys that are in the locks are lost. At Difficulties 1-11 (Levels 1-77), 4 keys are required to complete a level; at Difficulties 12-15 (Levels 78-105), 8 keys are required to complete a level.

While the student should not need formal instruction in order to learn from GeoRunner, the following suggestions provide a more structured means of teaching world geography.

<u>Tips for Planning Lessons:</u>

The program is designed so that a student starting at Difficulty stage 1 can play through consecutive levels by using knowledge acquired from lower levels. However, a student with some knowledge of world geography might appropriately start somewhere more advanced than Difficulty stage 1. If the student has had some exposure to world geography, you may wish to start by having the student explore the game and play a variety of different levels. Afterward, by examining the tracking file, you will be able to discover which locations and facts the student encountered, and by examining the number of refuelings required, you can determine which locations and/or clues were the most challenging for the student.

The following guidelines may help you assign specific Difficulty stages, first for learning geography and then for testing the student on the areas studied.

1. To help the student learn to identify the countries of the world, begin with Difficulties 1 and 2, which teach the shape and location of each country. Then use Difficulty 7 to test the

student's knowledge obtained from Difficulties 1 and 2. (Difficulty 7 requires the student to identify countries on a blank map.)

2. To help the student learn the capitals of each country, begin with Difficulty 3. In this stage, the student will identify the country and learn its capital. To test the knowledge obtained from playing Difficulty 3, advance to Difficulties 5, 8 and 12. In Difficulty 5, the student is asked to identify the country based on its capital; in Difficulties 8 and 12, the student is given the country and capital, but must find the country on a blank map. (Difficulty 12 is the same as Difficulty 8, except that the student must find twice as many keys to complete the game.) For more advanced testing, move to Difficulties 10 and 14, where the student must find capital cities on a blank map without being provided with the names of countries. (Difficulty 10 requires 4 keys to finish, whereas Difficulty 14 requires 8 keys.)

3. To help the student learn important facts about each country, begin with Difficulty 4, where the student will identify the country and learn a fact. To test the student's knowledge obtained from playing at Difficulty 4, advance to Difficulties 6, 9 and 11. (In Difficulties 6 and 11, the student will identify the country, based on a fact about it. In Difficulty 6, the map is labeled and the student's plane is automatically refueled; in Difficulty 11, the student must find the country on a blank map, with limited fuel. In Difficulty 9, the student is given the country and a fact, but must find the country on a blank map with limited fuel.) For more advanced testing of these skills, proceed to Difficulty 15, where the student must find a country on a blank map, based on a fact about the country, without being provided with its name. Difficulty 15 requires that the student find 8 keys to complete the game.

<u>Sample Lessons:</u>

Because the different levels of this program ask specific types of questions, you can assign certain levels or stages of difficulty based on the aspects of world geography you wish to teach. And because the questions are asked randomly, the same level can be played repeatedly. The following sample lessons are meant to serve as examples for focusing on specific aspects of world geography or on specific areas of the world. These sample lessons may serve as a guide for you to create similar lessons for other parts of the world.

Lesson 1: Continent/Ocean Recognition

Begin by having the student play World Level 1 several times. World Level 1 is the lowest level of the world map; it provides a clue and a visible key denoting the correct continent. After the student has mastered Level 1, have him or her move to Level 8, which offers the same clues, but no visible keys. Once the student has played Level 8 several times, advance to Levels 15, 22, 29, and 36, which provide increasingly complex clues and facts about the oceans and continents.

Lesson 2: Country Recognition in Africa

If you would like the student to learn the countries in Africa, begin by having the student play Level 5 several times. At Level 5, the game provides a clue and a visible key denoting the correct country. Once the student has mastered Level 5, advance to Level 12, which offers the same clues, but no visible keys. Then, progress to Level 47, where the student must find the country on a blank, unlabeled map. If you determine at Level 47 that the student needs more practice, go to Level 26 and then return later to Level 47.

Lesson 3: Capital Recognition in Africa

If you would like the student to learn the capitals of each country in Africa, begin by having the student play Level 19 several times. At Level 19, the game provides the name of the country and its capital, and the student must find the country on a map that has the country names displayed. Once the student has mastered Level 19, advance to Level 33, where the game play is identical, except that the game provides only the name of the capital and not the name of the country. Finally, advance to Levels 54, 68, 82 and 96, where the game play takes place on a blank, unlabeled map.